

Software Technology Support Center (STSC)

Helping Government Organizations Buy and Build Software Better



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Why This Project is Like Herding Cats

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Project Manager, Software Process Improvement

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Legacy Program Manager, Project Manager





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Outline



- **Introduction**
 - Moving From Herding Cats to a People System
- **Preferences and personality**
 - Internal and External Factors
 - The PMs Role in Understanding Your Team
 - Moving From Individual to Team
- **Clarifying and Communications**
 - Shared Understanding
- **Leading**
 - Managing Change
 - Empowering Project Team
- **Whole System Approach**
- **Case Study**
- **Meshing People and Process**
 - Building People Systems
- **Conclusion**





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MBTI® Preference Indices



Extraversion

Source of Energy

Introversion

Attitude

Sensing

Data Gathering

INtuition

Irrational Function

Thinking

Decision Making

Feeling

Rational Function

Judging

Lifestyle or Orientation

Perceiving

Attitude

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Case Study A: MBTI® Preferences



Team Size: 16

Group Type: INTJ

Application:
IT support

Issues:
Don't change: Keep things
the way they are
versus
Change: "Things would be
better if we did..."

Minimal communication
with customers

<div> <div>Sensing</div> <div>iNtuition</div> </div>			
ISTJ Contracts Manager (F) Team Lead (F) Programmer-Technician (M)	ISFJ	INFJ Hardware Support (M) Systems Analyst (M)	INTJ Project Manager (M) Quality Assurance (M) Systems Analyst (M)
ISTP	ISFP	INFP	INTP Programmer-Technician (M)
ESTP Programmer-Technician (F)	ESFP	ENFP	ENTP Programmer-Technician (M)
ESTJ Senior Project Manager (M) Programmer-Technician (M)	ESFJ	ENFJ	ENTJ Team Lead (M) Programmer-Technician (M) Systems Analyst (M)

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Levels of Change and MBTI



Continuous Improvement

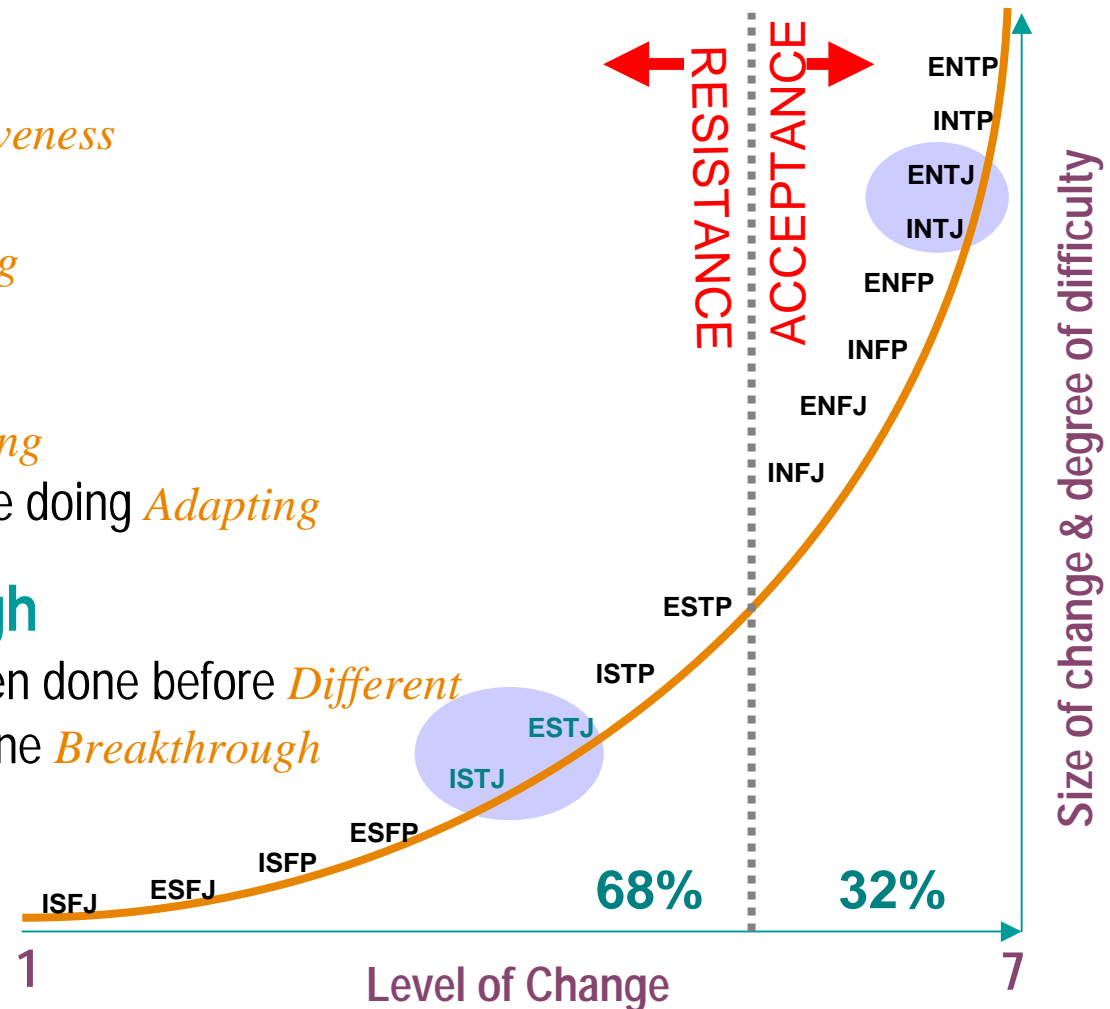
1. Doing the right things *Effectiveness*
2. Doing things right *Efficiency*
3. Doing things better *Improving*

Process Reengineering

4. Doing away with things *Cutting*
5. Doing things other people are doing *Adapting*

Breakout and Breakthrough

6. Doing things that haven't been done before *Different*
7. Doing things that can't be done *Breakthrough*



From [Smith, Rolf 97]





Case Study B: MBTI® Preferences



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Team Size: 15

Group Type: INTJ

Modal Type: ISFJ, ISTJ

Application:
PM Office

Issues:
Interview and hired
"themselves"

"Unconsciously" assigned
to similar preference

ISTJ	ISFJ	INFJ	INTJ
[New] Project Manager (F) [Rookie] Project Manager (M)	[New] Project Manager (M) [Rookie] Project Manager (M) Project Manager (M)	[New] Project Manager (M) [Rookie] Project Manager (M)	[New] Project Manager (M) Project Manager (M) Project Manager (M)
ISTP	ISFP	INFP	INTP
Project Manager (M)			
ESTP	ESFP	ENFP	ENTP
ESTJ	ESFJ	ENFJ	ENTJ
Project Manager (M) Project Manager (M)	Project Manager (M)		Program Manager (M)

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Case Study C: MBTI® Preferences



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Team Size: 17

Group Type: i s T J

Application:
Systems Development

Issues:
Matrix structure

"Herding cats"

PM: "How do I get
effective cooperation?"

"Celebrating" diversity

ISTJ	ISFJ	INFJ	INTJ
Systems Test (M) Software Engineer (M)	Administrative Assistant (F)	Tester (F)	Technical Project Lead (M) Business Analyst (M)
ISTP	ISFP	INFP	INTP
Programmer Analyst (F)	Programmer (F)	Cat-like Behavior: I n f P	Programmer (M)
ESTP	ESFP	ENFP	ENTP
Technician (M)		Marketing Liaison (M)	Programmer (M)
ESTJ	ESFJ	ENFJ	ENTJ
Quality Assurance (M) Programmer (M)	Business Analyst (F)	Lead Software Engineer (M)	Project Manager (M)

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Foster a Shared Understanding



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- Everyone must work on the **SAME** project
- Shared Understanding comes from:
 - Common goals
 - Project expectation, values, assumptions
 - Known buy-in and commitment (desire to participate)
 - Common language and terminology
- **Team Charter**
 - Document that **formally recognizes the existence** of the team and the project
 - Provides direction on the project's objectives and management
 - Delineates the roles and responsibilities of team members
- **Clear and Constant Communication is Essential**





Influences of a Project Manager



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- **Climate of Trust**
- **Culture**
- **Communication**
- **Recognition**
- **Valuing**
- **Empowerment**
- **Ethical practices**
- **Priorities**
- **Clarity**

Somebody will set the rhythm, tone, tempo of the organization and the accompanying projects

Will it be the Project Manager or will it grow spontaneously?

Management creates the culture and project environment either way

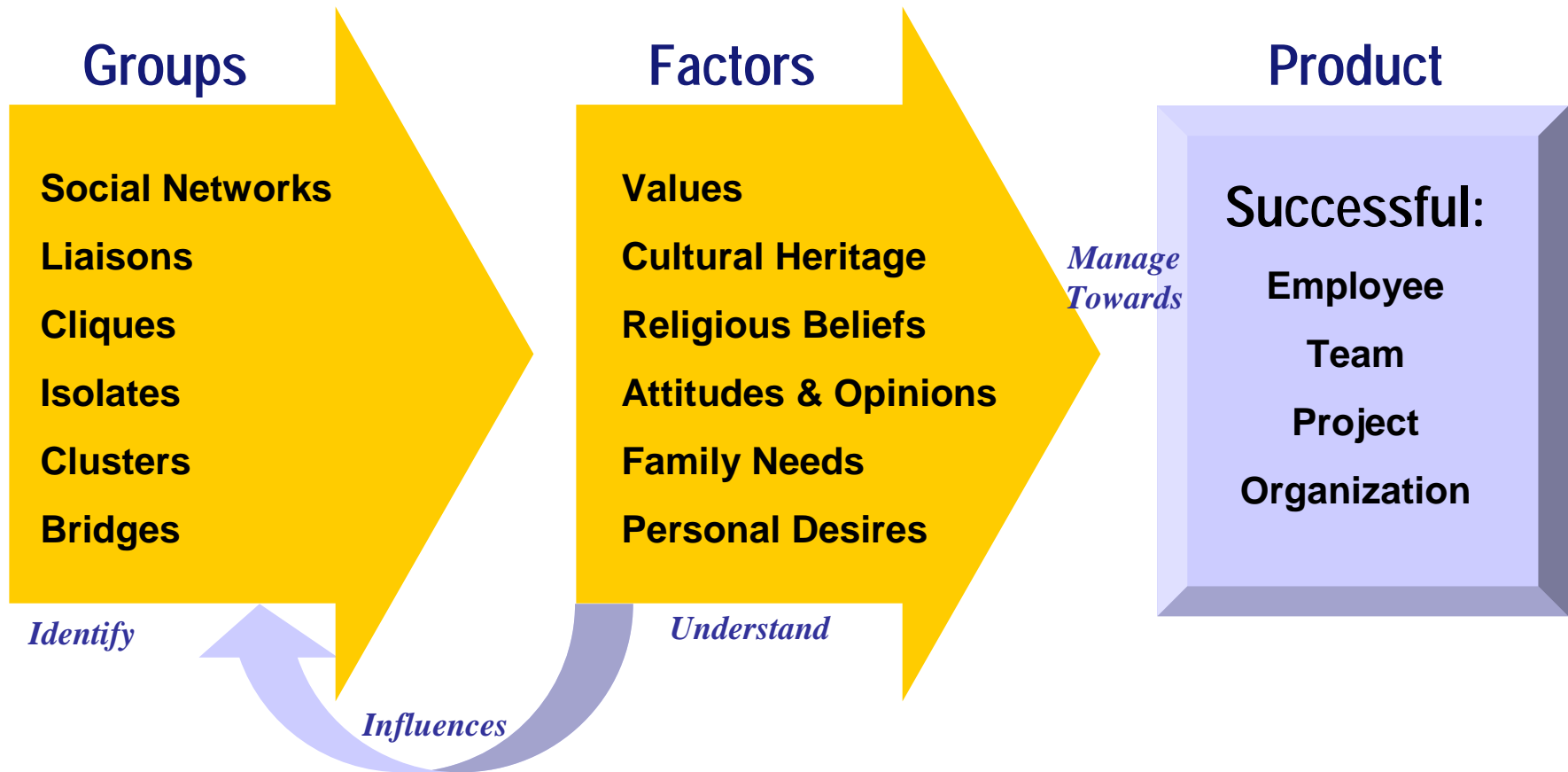
"Quality Work is Addictive"
(Glasser)



People Components in the System

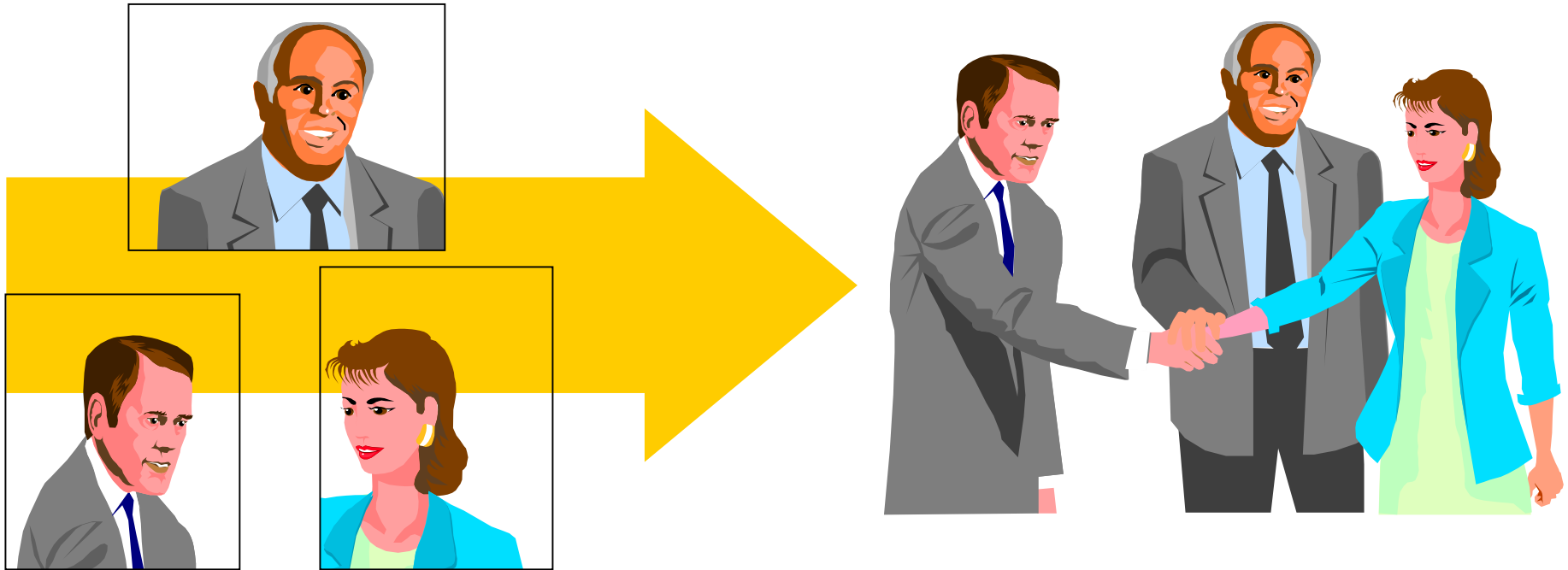


Identify and Manage Infrastructure of People System



Adapted from: Steven P. Robbins, *Organizational Behavior: Concepts, Controversies, Applications*

People Components and Systems Engineering

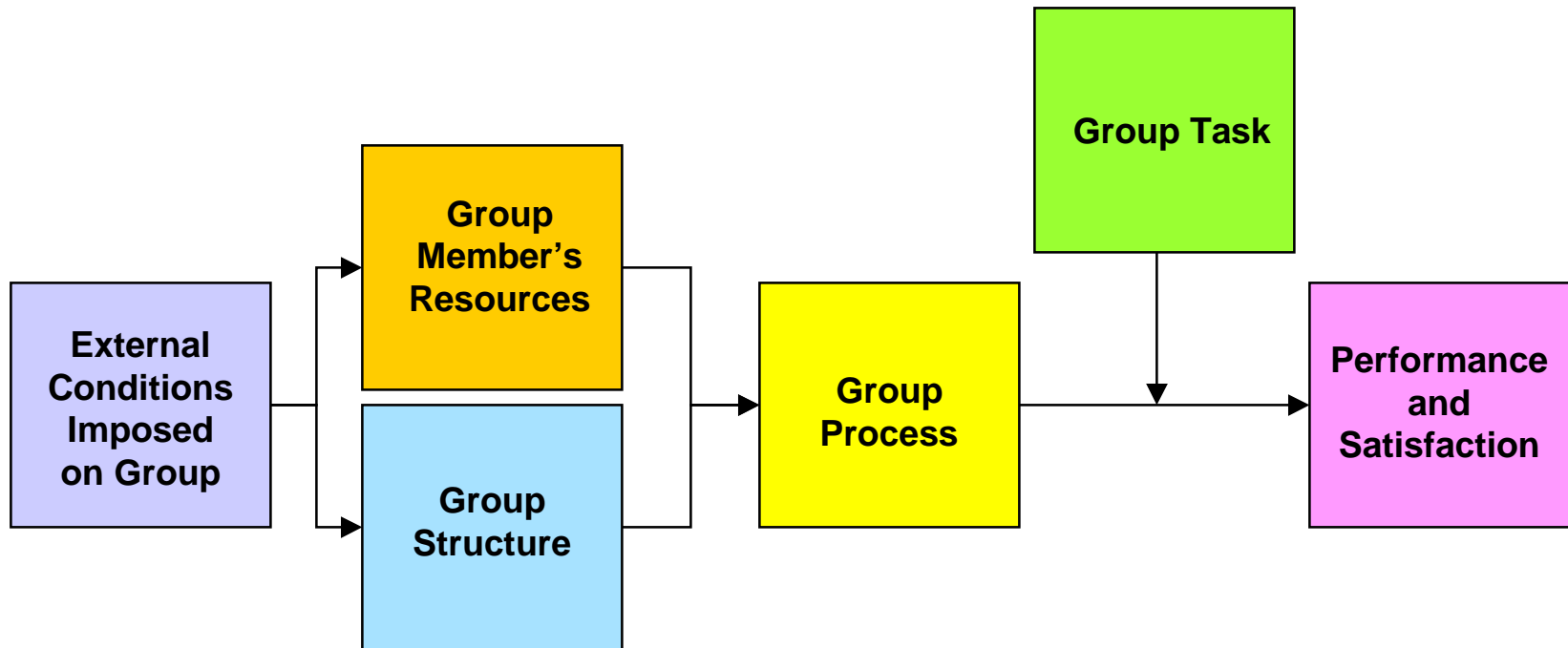


Each New Project is Also a New System



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Group Behavior Model



Steven P. Robbins, *Organizational Behavior: Concepts, Controversies, Applications*, 6th Ed., Prentice Hall, EngleWood Cliffs, NJ, 1996.



PM Responsible for Creating People Cohesion



- **The PM is the **common** factor on the Project Team**
 - Cohesion among members reduces “cat-like” tendencies
- **As a PM you must:**
 - Identify your system components (i.e., individuals, groups)
 - Be cognitive of each person’s personality and perspective
 - Assign work according to each person’s strengths (if possible)
 - Create assignments that align with each person’s interests
 - Accentuate the positives and mitigate weaknesses
 - Provide accolades and praise
 - Be aware of people’s personal desires (personal “wins”)

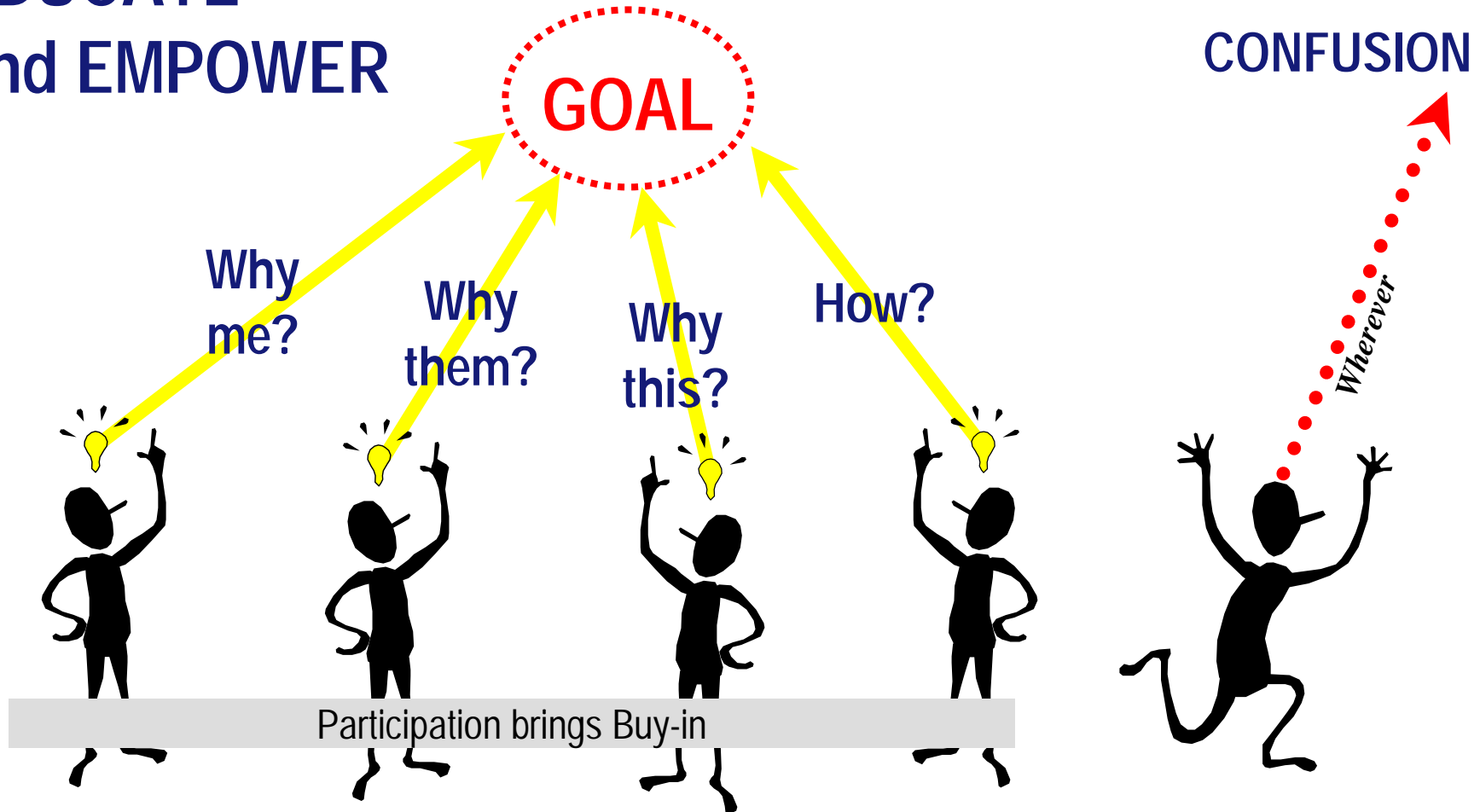


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Clarifying Strategic Intent



EDUCATE and EMPOWER





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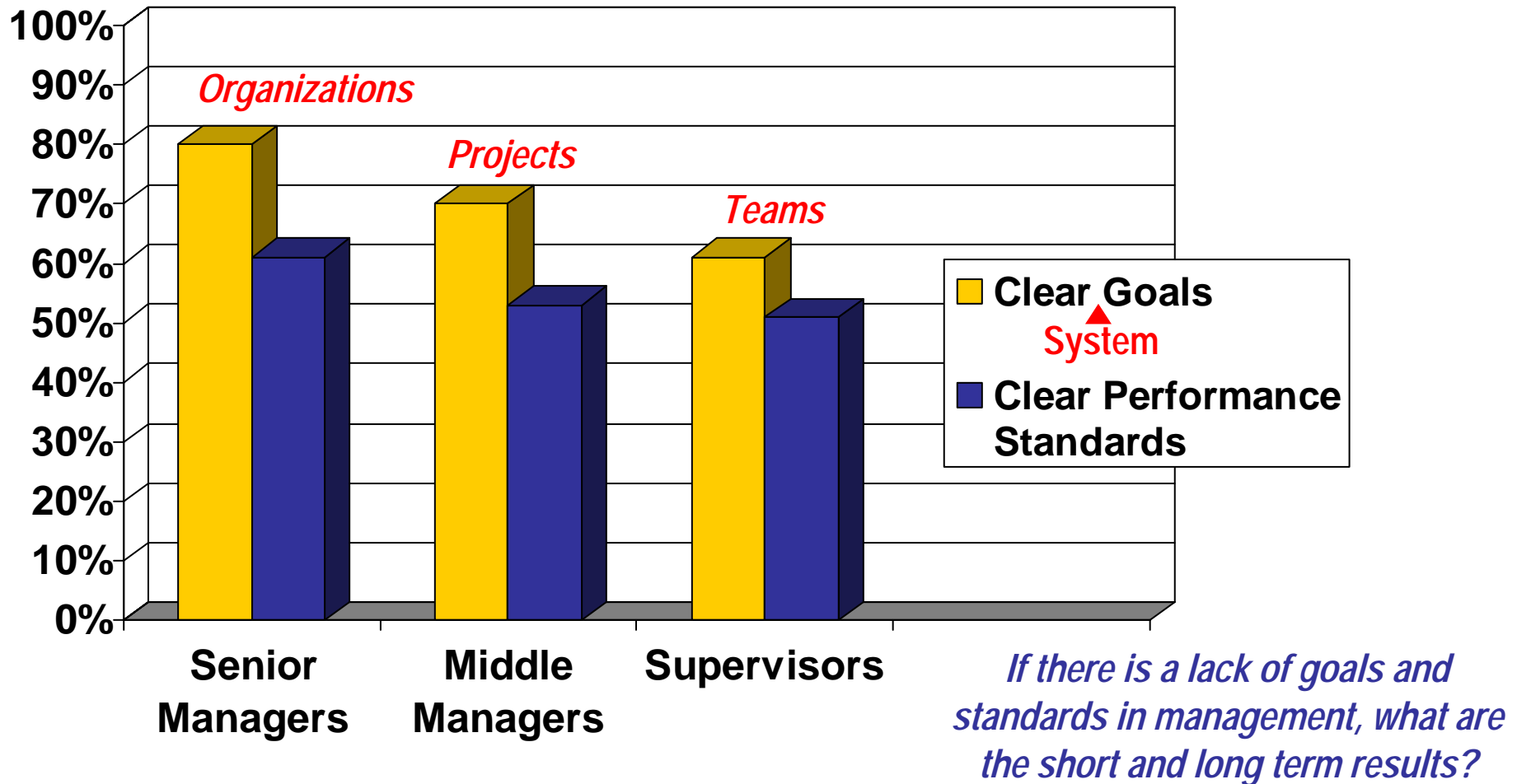
Continual Clarity Is The Key



- Define what needs to be accomplished (results) - **GOAL**
- Take sufficient time to:
 - Assure that everyone understands their role - **WHY ME?**
 - Explain how each role contributes to completing the whole project - **WHY THEM?**
- “Push back [or up]” for the sake of clarity - **WHY THIS?**
 - Ask questions...even of those up the chain
- State the obvious from time to time
 - Assuming people know will get you in trouble
- Disseminate information as appropriate
 - Lack of communication *always* causes confusion



Goal Clarity and Performance Standards Understood



Based on D.W. Sommer and M. Froshman, "American Management (Still) Missing Some Basics," *Industry Week* (July 20, 1992) pp. 36-37.

Different people...Different communications



... written reports...staff meetings...schedule changes...web-site...status reviews...PMR...
... e-mail...contracts...meeting minutes...reviews...change requests...teleconference...files...

How many communication plans have you seen?



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Communication Plan



■ Define:

- Who needs to know what and when
- Who owns the information
- What format it will be distributed
- What needs to be stored and how (soft, hard, length)

■ Assign:

- Responsibility for each specific communication
- Responsibility for storage of records/maintenance

■ Schedule:

- Reviews, conference calls that recur frequently

■ Design:

- Flowchart for dissemination - Don't leave anyone out

Components Need
Links to be a System

Document and
Execute as a
Communication Plan





Building a “People” System



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- Ensure a common understanding about organizational goals
- Clarifying responsibilities among your team
- Entrusting and empowering others to make decisions
- Communicating all aspects of the project throughout the project team
- **Lead**
 - ...while soliciting and implementing input from others (Whole System)
 - ...and allow (coach) people to do what they do best.
- **The difference between management and leadership.**
 - Build a combination of good leadership and management
- Begin to institutionalize processes and understanding
 - Example CMMI



Management is about coping with complexity. Its practice and procedures are largely a response to one of the most significant developments of the 20th century: the emergence of large organizations. **Without good management, complex enterprises tend to become chaotic in ways that threaten their very existence. Good management brings a degree of order and consistency to key dimensions like the quality and profitability of products.**

Leadership, by contrast, is about coping with change. Part of the reason it has become so important in recent years is that the business world has become more competitive and more volatile....The net result is that doing what was done yesterday, or doing it 5% better, is no longer a formula for success. Major changes are more and more necessary to survive and compete effectively in this new environment.

More change always demands more leadership.

John P. Kotter, “What Leaders Really Do,” *Harvard Business Review* 68, no. 3 (May-June 1990), p. 104.

*The essence of management is **recognizing the need for change**, then initiating, controlling, and directing it, and solving the problems along the way.*

—Introduction to the Theory of Constraints, H. William Dettmer

*Average managers are concerned with methods, opinions and precedents.
Good managers are concerned with **solving problems**.*

—Unknown

*The power of the whole-system approach lies not so much in management sponsorship, but in **high engagement and involvement** of the **entire organization**.*

—Flawless Consulting, 2nd Ed., Peter Block

Selecting a Cross Section to Build Your System



■ Why a Whole-System Approach?

- Maintain intimate knowledge of the work and the problems
- Avoid a few people speaking for an entire group
- The learning stays with the organization
- People make the decisions as well as implement their own ideas
- Project Teams can completely permeate the entire organization
 - Managers can disseminate information to all areas of the system and can receive information back
 - No dark corners
- Buy-in has already begun and spreads insidiously



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Whole System Case Study



■ Binney and Smith (Crayola Brand Crayons)

- Lindsay plant was ordered to double production to 4 million 16 stick boxes
- Work was accomplished by teams using employee input in every aspect of the plant's operation
- Goal was accomplished without financial or other rewards
- Employees did receive:
 - recognition
 - opportunity to learn
 - greater control by implementing employee ideas
 - increased job satisfaction and self-esteem
 - additional Job security due to 15-25% reduction in plant costs
- The Lindsay plant doubled its profits

Source: Based on J. Wells, "Winning Colours," *Report on Business Magazine* (1992)





Building a “People” System



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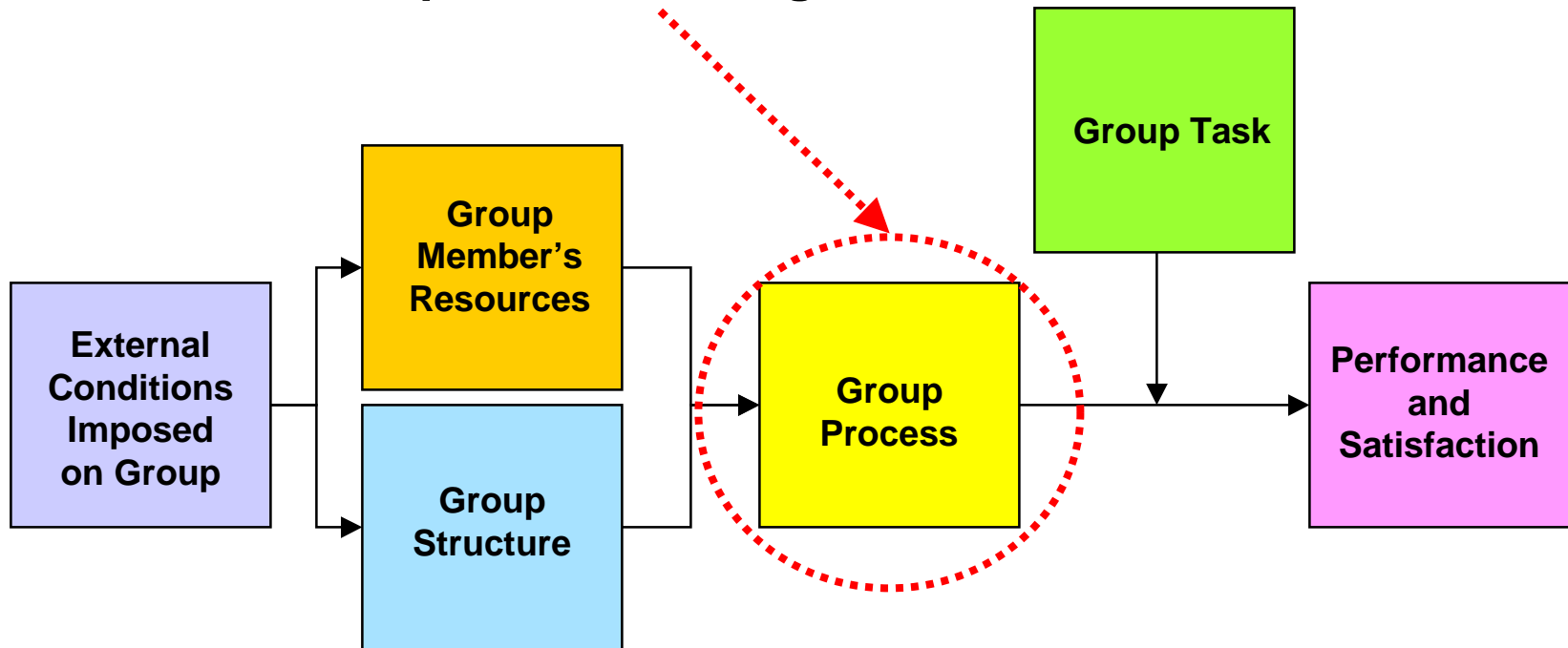
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Group Processes - Placing People in the System

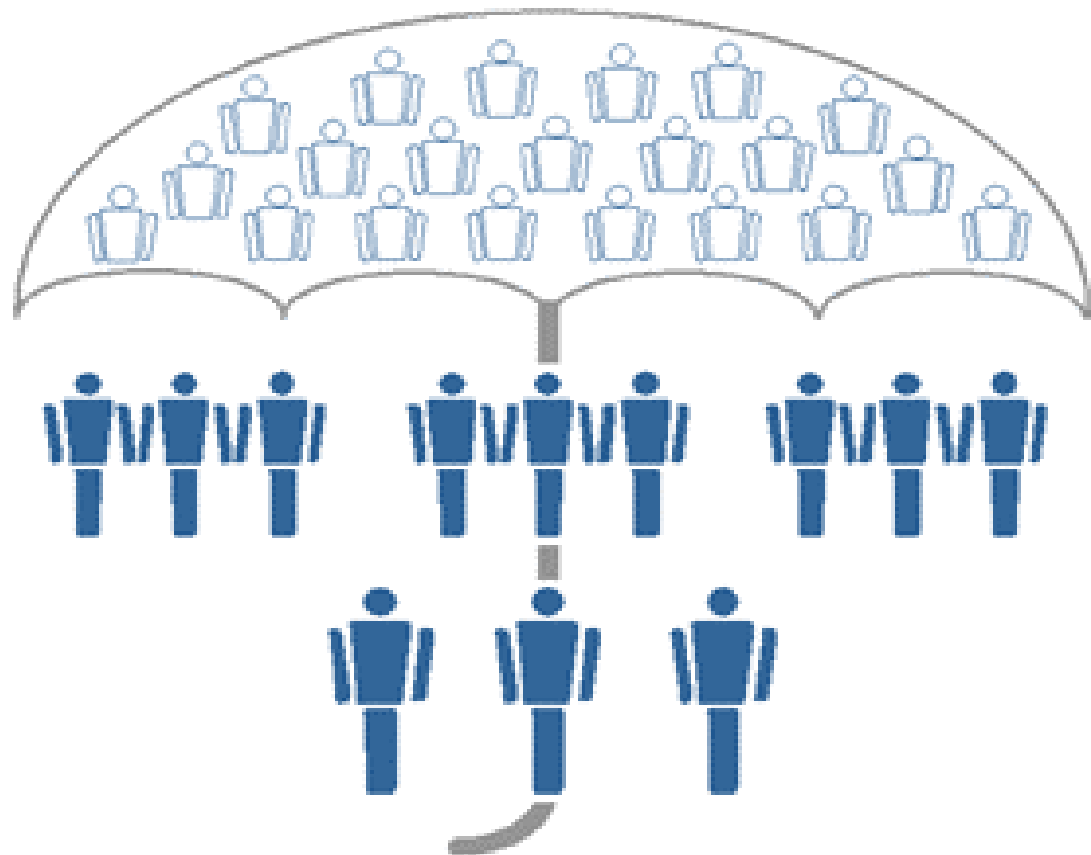


How Do We Get Work DONE?
People—Performing—Work



Steven P. Robbins, *Organizational Behavior: Concepts, Controversies, Applications*, 6th Ed., Prentice Hall, EngleWood Cliffs, NJ, 1996.

Personal Software ProcessSM Team Software ProcessSM





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Summary

- **Project Teams Are Human Systems**
- **Summarize**
 - Traits - Components
 - Group - Engineering
 - Clarification
 - Communication - Links
 - Leadership
 - Whole System - Power/Electricity
- **Common sense**
 - But, not commonly planned or executed
- **Define and Implement the process**





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Readings and References



- Demarco, Tom and Lister, Tim, *Peopleware: Productive Projects and Teams*, 2nd Ed. Dorset House, 1999.
- Jensen, Bill, *Simplicity: The New Competitive Advantage*, Perseus Books, Cambridge MA, 2000.
- Kroeger, Otto and Thuesen, Janet M, *Type Talk at Work: How the 16 Personality Types Determine Your Success on the Job*, Bantam Doubleday Publishing Group, New York, NY, 1993.
- Peters, Tom, *The Project 50 (Reinventing Work): Fifty Ways to Transform Every "Task" into a Project That Matters!*, Knopf, 1999.
- Smith, Larry W., "Stakeholder Analysis: A Pivotal Practice in Successful Project," *Proceedings of the Project Management Institute (PMI) 2000 Symposium*, September 2000.
- Verma, Vijay K., *Managing the Project Team: The Human Aspects of Project Management*, Vol. 3, Project Management Institute (PMI), Upper Darby, PA, 1997.
- Atkinson, Philip E., *Creating Culture Change: The Key to Successful Total Quality Management*, Pfeiffer and Company, Kempston, UK, 1990.
- Stoner, James A.F. and Freeman, R. Edward, *Management*, 4th Ed., Prentice Hall, Englewood Cliffs, NJ, 1989.
- Pearce and Robinson, *Strategic Management, Formulation, Implementation and Control*, 6th Ed., Irwin McGraw-Hill, Boston, MA, 1997.
- Robbins, Steven P., *Organizational Behavior: Concepts, Controversies, Applications*, 6th Ed., Prentice Hall, EngleWood Cliffs, NJ, 1996.

